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Ryan, Mason & Lewis, LLP  
90 Forest Avenue  
Locust Valley, NY 11560

EXAMINER
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SHEIKH, ASFAND M

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

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1 UNITED STATES PATENT AND TRADEMARK OFFICE

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3  
4 BEFORE THE BOARD OF PATENT APPEALS  
5 AND INTERFERENCES  
6

7  
8 Ex parte CHUNG-SHENG LI and MAHMOUD NAGHSHINEH  
9

10  
11 Appeal 2009-003980  
12 Application 09/896,584  
13 Technology Center 3600  
14

15 Decided: August 10, 2009  
16

17  
18 Before MURRIEL E. CRAWFORD, HUBERT C. LORIN, and  
19 ANTON W. FETTING, *Administrative Patent Judges*.

20 FETTING, *Administrative Patent Judge*.

21 DECISION ON APPEAL

1 STATEMENT OF THE CASE

2  
3 Chung-Sheng Li and Mahmoud Naghshineh (Appellants) seek review  
4 under 35 U.S.C. § 134 (2002) of a non-final rejection of claims 1-4, 7-10,  
5 13, 15-18, and 21-26, the only claims pending in the application on appeal.  
6 We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b) (2002).

7 SUMMARY OF DECISION<sup>1</sup>

8 We AFFIRM.

9 THE INVENTION

10 The Appellants invented a method and an apparatus to automate  
11 inventory replenishing techniques which employ remote sensors for  
12 collecting information, and brokers for aggregating and deaggregating of the  
13 collected information and for leveraging conditions associated with an  
14 electronic market place (Specification 1:9-13).

15 An understanding, of the invention, can be derived from a reading of  
16 exemplary claims 1 and 10, which are reproduced below [bracketed matter  
17 and some paragraphing added].

18 1. A computer-based method of automatically controlling an  
19 inventory of items, the method comprising the steps of:

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<sup>1</sup> Our decision will make reference to the Appellants' Appeal Brief ("App. Br.," filed February 21, 2008) and Reply Brief ("Reply Br.," filed June 23, 2008), and the Examiner's Answer ("Ans.," mailed June 23, 2008), and Final Rejection ("Final Rej.," mailed September 25, 2007).

- [1] at least one broker device automatically collecting  
information relating to a status associated with at least one  
inventory item from one or more sources;  
[2] the at least one broker device automatically accessing at  
least one electronic marketplace, wherein the electronic  
marketplace comprises an electronic trading network site, the  
broker device accessing the electronic marketplace in order to:  
(1) obtain information to determine one or more optimal  
parameters, based on the collected status information, to  
be used for replenishing the at least one inventory item  
via the at least one electronic marketplace; and  
(2) order a quantity of the inventory item via the  
electronic marketplace from a provider of the inventory  
item; and  
[3] the at least one broker device one of aggregating and  
deaggregating multiple orders for the inventory item associated  
with the one or more sources so as to minimize an overall  
purchasing cost attributable to the multiple orders.

10. The method of claim 1, further comprising the step of  
automatically generating a recommendation of at least one of a  
different brand and a different type of an item to a consumer of the  
inventory.

#### THE REJECTIONS

The Examiner relies upon the following prior art:

Salvo et al.	US 6,341,271 B1	Jan. 22, 2002
Shkedy	US 6,260,024 B1	Jul. 10, 2001
Whiteis	US 5,749,081	May 5, 1998

Claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26 stand rejected under  
U.S.C. § 103(a) as being unpatentable over Salvo and Shkedy.

Claims 10 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Salvo, Shkedy, and Whiteis.

### ARGUMENTS

Claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26 rejected under 35 U.S.C. § 103(a) as being unpatentable over Salvo and Shkedy

The Appellants argue these claims as a group.

Accordingly, we select claim 1 as representative of the group. 37 C.F.R. § 41.37(c)(1)(vii) (2008).

The Examiner found that Salvo describes all of the limitations of claim 1, except for the limitations of an electronic market place. Where the electronic market place comprises an electronic trading network site, ordering a quantity of inventory via the electronic market place, and the at least one broker device, which for aggregating and deaggregating multiple orders in the inventory, to minimize an overall purchasing cost attributable to the multiple orders. Answer 4-5. The Examiner found that Shkedy describes these features. Answer 5. The Examiner further found that a person with ordinary skill in the art would have recognized the benefit of obtaining the best price by buying in larger quantities and a person with ordinary skill in the art would have found it obvious to combine Salvo and Shkedy. Answer 5-6.

The Appellants contend that (1) Salvo cannot teach any of the claimed limitations, without disclosing an electronic marketplace and thus the Examiner's rejection resembles a hindsight-based, piecemeal analysis with no motivation to combine the prior art, as per independent claims 1, 15, and 25 (App. Br. 7-10 and Reply Br. 2-4); (2) Shkedy fails to remedy the

1 deficiencies of Salvo, discussed *supra* and Shkedy further fails to describe a  
2 broker device which aggregates and deaggregates multiple orders for the  
3 inventory item associated with the one or more sources in order to minimize  
4 an overall purchasing cost attributable to multiple orders, as required per  
5 limitation [3] (App. Br. 8-9 and Reply Br. 4-5), and (3) Salvo fails to  
6 describe the limitations recited in claims 2-4 and 16-18. Appeal Brief 11.

7 Claims 10 and 24 rejected under 35 U.S.C. § 103(a) as being  
8 unpatentable over Salvo, Shkedy, and Whiteis

9 The Appellants argue these claims as a group.

10 Accordingly, we select claim 10 as representative of the group.

11 The Examiner found that Salvo and Shkedy fail to describe the step of  
12 automatically generating a recommendation of at least one of a different  
13 brand and different type of an item to a consumer of the inventory. Answer  
14 8. The Examiner found that Whiteis describes this feature. Answer 8. The  
15 Examiner further found that a person with ordinary skill in the art would  
16 have recognized the benefit of increasing the likelihood of a sale by  
17 providing an accurate and subjective recommendation when providing a  
18 recommendation of a different brand and different type. Answer 8. The  
19 Examiner also found that a person with ordinary skill in the art would have  
20 found it obvious to combine Salvo, Shkedy, and Whiteis. Answer 8.

21 The Appellants contend that (1) Salvo and Shkedy fail to describe all  
22 of the limitations of claims 1, 15, and 22, as discussed *supra* (App. Br. 11-  
23 12), (2) Whiteis fails to cure the deficiencies of Salvo and Shkedy, as  
24 discussed *supra* (App. Br. 12), and (3) there is no motivation to combine  
25 Salvo, Shkedy, and Whiteis. Appeal Brief 12.

ISSUES

The issues pertinent to this appeal are (1) whether the Appellants have sustained their burden of showing that the Examiner erred in rejecting claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Salvo and Shkedy and (2) whether the Appellants have sustained their burden of showing that the Examiner erred in rejecting claims 10 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Salvo, Shkedy, and Whiteis. The pertinent issues turn on whether Salvo and Shkedy describe all of the limitation of claims 1, 15, and 22 and whether there is motivation to combine the prior art.

FACTS PERTINENT TO THE ISSUES

The following enumerated Findings of Fact (FF) are believed to be supported by a preponderance of the evidence.

*Facts Related to Appellants' Disclosure*

01. Aggregating purchase orders enables clients to realize the cost benefits of volume purchasing (Specification 9:21-23). Deaggregating purchase orders may enable the advantages of purchasing opportunities in smaller quantities (Specification 9:23-24).

*Facts Related to the Prior Art*

*Salvo*

02. Salvo is directed to a vendor-managed inventory system and method. Salvo 1:7-8. The inventory management system permits monitoring and determining real-time status of storage receptacles and the automatic

1 ordering of inventory to replenish the receptacles at the lowest possible  
2 price. Salvo 3:42-48. The inventory monitoring permits historical analysis  
3 of inventory use, evaluation of inventory usage, automation and suggestions  
4 for a vendor's manufacturing schedule. Salvo 3:48-52. The inventory  
5 monitoring also permits the prediction of future inventory usage, including  
6 forecasting based on trends and economic indicators. Salvo 3:52-56.

7 03. The inventory ordering considers many factors, including historical  
8 inventory usage trends, real-time needs, economic models, pricing models,  
9 information concerning estimated future needs and changes, inventory  
10 supply time, and comparative pricing and purchasing ability. Salvo 3:57-62.

11 04. The inventory management system interacts with and connects to  
12 inventory price sources. Salvo 3:65-66 and 6:7-9. The control unit of the  
13 system is provided with information for analyzing inventory purchase prices  
14 from different vendors. Salvo 6:47-49. The control unit is able to determine  
15 the lowest available price for the inventory. Salvo 6:7-9. The control unit  
16 analyzes price information to determine when inventory price is close to  
17 historical highs and lows and is able provide the opportune time to purchase  
18 items. Salvo 6:20-24. The control unit is further connected to shipping  
19 information in order to include shipping parameters when determining total  
20 inventory price, such as size and type of vehicles available and restrictions  
21 on shipping when considering hazardous or perishable items. Salvo 6:28-29  
22 and 6:41-46.



*Shkedy*

05. Shkedy is directed to a system and method for facilitating a transaction between a plurality of buyers, an intermediary, and a plurality of sellers over an electronic network. Shkedy 1:9-13.

06. The system aggregates individual buyer's purchase orders into collective purchase orders and solicits sellers to bid on the collective purchase orders. Shkedy 4:48-51. A buyer enters a forward purchase order (FPO) and each buyer order is added to a pooled purchase order (PPO). Shkedy 5:10-15 and 6:1-3. The central controller publishes the PPO, making it is accessible by potential sellers, such as on a website on the internet. Shkedy 6:3-6. The seller then communicates an intention to bid to the central controller. Shkedy 6:18-20.

*Whiteis*

07. Whiteis is directed to a system and method of recommending items to a user. Whiteis 1:7-9.

08. Whiteis makes recommendations to a user that are based on other items previously sampled by a user for which the user had a positive reaction. Whiteis 2:1-3.

*Facts Related To The Level Of Skill In The Art*

09. Neither the Examiner, nor the Appellants has addressed the level of ordinary skill in the pertinent art inventory management. We will therefore consider the cited prior art as representative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he absence of specific findings on the level of skill in the art does not

1 give rise to reversible error ‘where the prior art itself reflects an appropriate  
2 level and a need for testimony is not shown’”) (*quoting Litton Indus. Prods.,*  
3 *Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985).

4  
5 *Facts Related To Secondary Considerations*

6 10. There is no evidence on record of secondary considerations of non-  
7 obviousness for our consideration.

8 PRINCIPLES OF LAW

9 *Obviousness*

10 A claimed invention is unpatentable if the differences between it and  
11 the prior art are “such that the subject matter as a whole would have been  
12 obvious at the time the invention was made to a person having ordinary skill  
13 in the art.” 35 U.S.C. § 103(a) (2000); *KSR Int’l Co. v. Teleflex Inc.*, 550  
14 U.S. 398, 406 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966).

15 In *Graham*, the Court held that that the obviousness analysis is  
16 bottomed on several basic factual inquiries: “[ (1) ] the scope and content of  
17 the prior art are to be determined; [ (2) ] differences between the prior art and  
18 the claims at issue are to be ascertained; and [ (3) ] the level of ordinary skill  
19 in the pertinent art resolved.” 383 U.S. at 17. *See also KSR*, 550 U.S. at  
20 406. “The combination of familiar elements according to known methods is  
21 likely to be obvious when it does no more than yield predictable results.”  
22 *KSR*, 550 U.S. at 416.

ANALYSIS

*Claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26 rejected under 35 U.S.C. § 103(a) as being unpatentable over Salvo and Shkedy*

The Appellants first contend that, (1) Salvo cannot teach any of the claimed limitations without disclosing an electronic marketplace, and (2) the Examiner's rejection resembles hindsight based on a piecemeal analysis of the prior art, as per independent claims 1, 15, and 25. Appeal Brief 7-8 and Reply Br. 2-4. The Appellants further contend that the Examiner failed to provide sufficient motivation to combine Salvo and Shkedy. Appeal Brief 9-10 and Reply Br. 3-4. We disagree with the Appellants.

Claim 1 requires a broker device accessing an electronic marketplace and the marketplace comprises an electronic trading network. Claim 1 further requires the broker device to obtain information to determine optimal parameters to replenish an inventory item and order a quantity of the item. Salvo describes a broker that connects to a plurality of pricing sources, where the broker obtains information used to optimize the inventory management and can order items from a vendor of the item for inventory. FF 02, FF 03, and FF 04.

Salvo describes limitations [1] and [2] of claim 1, except for the requirement to access a marketplace. As noted, by the Examiner, Salvo does not describe a marketplace as defined by the claimed invention.

Shkedy describes publishing purchase orders to a marketplace that enables sellers to bid on the purchase orders. FF 06. Shkedy further describes limitation [3] (discussed infra.

Both Salvo and Shkedy are concerned with solving the problem of procuring items at optimal costs. FF02 and FF 05. Salvo accomplishes this

1 by monitoring inventory parameters and market prices and then determines  
2 an optimal time to purchase inventory items. FF 03 and FF 04. Shkedy  
3 accomplishes this by aggregating purchase orders in order to receive a better  
4 price for purchasing items in greater quantities. FF 06.

5 A person with ordinary skill in the art would have recognized the  
6 benefit of lower purchasing costs by aggregating purchase orders. As such,  
7 a person with ordinary skill in the art would have found it obvious to  
8 combine this feature described by Shkedy with Salvo, in order to obtain a  
9 better price for items in inventory. Salvo accesses vendor pricing sources  
10 (FF 04) and as such, a person with ordinary skill in the art would have a  
11 reasonable expectation of success in using Salvo to access a marketplace as  
12 described by Shkedy. Hence, the Examiner properly found that these  
13 elements were known to a person with ordinary skill in the art at the time of  
14 the claimed invention and therefore, did not perform a hindsight-based  
15 piecemeal analysis of the prior art.

16 The Appellants also contend that (2) Shkedy fails to remedy the  
17 deficiencies of Salvo, discussed *supra*. Appeal Brief 8-9. We disagree with  
18 the Appellants. The Examiner has not relied on Shkedy to describe the  
19 limitations the Appellants allege Salvo is deficient in describing. As such,  
20 this contention does not persuade us of error on the part of the Examiner  
21 because the Appellants respond to the rejection by attacking the references  
22 separately, even though the rejection is based on the combined teachings of  
23 the references. Nonobviousness cannot be established by attacking the  
24 references individually when the rejection is predicated upon a combination  
25 of prior art disclosures. *See In re Merck & Co. Inc.*, 800 F.2d 1091, 1097,  
26 (Fed. Cir. 1986).

1       The Appellants further contend that Shkedy fails to describe at a  
2 broker device, one of aggregating and deaggregating multiple orders for the  
3 inventory item associated with the one or more sources so as to minimize an  
4 overall purchasing cost attributable to multiple orders, as required per  
5 limitation [3] of claim 1. Appeal Brief 8-9 and Reply Br. 4-5. The  
6 Appellants specifically contend that Shkedy is silent as to deaggregating  
7 orders so as to minimize an overall purchasing cost. Appeal Brief 9. We  
8 disagree with the Appellants.

9       Limitation [3] requires one of aggregating and deaggregating orders,  
10 in order to minimize a purchasing cost. The broker must either aggregate or  
11 deaggregate orders. The Specification defines aggregating as, the combining  
12 of orders to realize the benefits of volume purchasing, and deaggregating as,  
13 reducing the quantity of an item to be purchased. FF 01. Shkedy describes  
14 that buyers create orders and can select a pool to join their purchase order, in  
15 order to receive a better price. FF 06. The buyer's purchase order is  
16 aggregated with other purchase orders increasing the volume. Shkedy  
17 further describes that the pooled purchase orders (PPO) are available for  
18 sellers to bid on and the seller with the best bid is awarded the PPO. FF 06.  
19 As such, Shkedy does address aggregating and deaggregating orders.

20       The Appellants further contend that (4) Salvo fails to describe the  
21 limitations recited in claims 2-4 and 16-18. Appeal Brief 11. We disagree  
22 with the Appellants.

23       Salvo describes monitoring pricing information for an inventory item,  
24 as per claims 2 and 16 (FF 02 and FF 03); Salvo describes an optimal  
25 parameter for inventory supply time, including restrictions on perishable  
26 items, as per claims 3 and 17 (FF 02 and FF 03); and Salvo describes total

1 inventory at a lower purchase price, as per claims 4 and 18. FF 02 and FF  
2 03. The Appellants have failed to provide any further arguments or rationale  
3 as to why the Examiner erred in rejecting these claims.

4 The Appellants have not sustained their burden of showing that the  
5 Examiner erred in rejecting claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26  
6 under 35 U.S.C. § 103(a) as unpatentable over Salvo and Shkedy.

7  
8 *Claims 10 and 24 rejected under 35 U.S.C. § 103(a) as being unpatentable*  
9 *over Salvo, Shkedy, and Whiteis*

10 The Appellants first (1) rely on their arguments in support of claims 1,  
11 15, and 25 above, which we did not find to be sufficient to overcome the  
12 Appellants' burden *supra* and so do not find these arguments sufficient here.

13 The Appellants further contend that (2) Whiteis fails to cure the  
14 deficiencies of Salvo and Shkedy, discussed *supra*. Appeal Brief 12. We  
15 disagree with the Appellants.

16 The Examiner has not relied on Whiteis; to describe the limitations  
17 the Appellants allege Salvo and Shkedy are deficient in describing. As such,  
18 the Appellants' contention does not persuade us of error on the part of the  
19 Examiner because the Appellants respond to the rejection by attacking the  
20 references separately, even though the rejection is based on the combined  
21 teachings of the references. "Nonobviousness cannot be established by  
22 attacking the references individually when the rejection is predicated upon a  
23 combination of prior art disclosures." *See In re Merck & Co. Inc.*, 800 F.2d  
24 1091, 1097, (Fed. Cir. 1986).

25 The Appellants also contend that (3) there is no motivation to  
26 combine Salvo, Shkedy, and Whiteis. Appeal Brief 12. We disagree with

1 the Appellants. Salvo and Shkedy are concerned with the procurement of  
2 items and solve these concerns, as discussed *supra*. Whiteis is also  
3 concerned with sale/purchase of items. FF 07. Whiteis accomplishes this by  
4 making recommendations to a user based on the user's reactions to  
5 previously viewed items. FF 08. A person with ordinary skill in the art  
6 would have recognized the benefit of matching buyers to items they prefer in  
7 order to increase the likelihood of a sale. As such, a person with ordinary  
8 skill in the art would have been lead to combine the features of  
9 recommending items to a user based on a user's preferences as described by  
10 Whiteis with Salvo and Shkedy in order to increase the likelihood of a  
11 sale/purchase of an item.

12 The Appellants have not sustained their burden of showing that the  
13 Examiner erred in rejecting claims 10 and 24 under 35 U.S.C. § 103(a) as  
14 unpatentable over Salvo, Shkedy, and Whiteis.

#### 15 CONCLUSIONS OF LAW

16 The Appellants have not sustained their burden of showing that the  
17 Examiner erred in rejecting claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26  
18 under 35 U.S.C. § 103(a) as being unpatentable over Salvo and Shkedy.

19 The Appellants have not sustained their burden of showing that the  
20 Examiner erred in rejecting claims 10 and 24 stand rejected under 35 U.S.C.  
21 § 103(a) as being unpatentable over Salvo, Shkedy, and Whiteis.

#### 22 DECISION

23 To summarize, our decision is as follows.

- 1 • The rejection of claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26 under  
2 35 U.S.C. § 103(a) as being unpatentable over Salvo and Shkedy is  
3 sustained.
- 4 • The rejection of claims 10 and 24 under 35 U.S.C. § 103(a) as being  
5 unpatentable over Salvo, Shkedy, and Whiteis is sustained.
- 6 No time period for taking any subsequent action in connection with  
7 this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

8 AFFIRMED

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10  
11  
12 mev

13  
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